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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,096	07/22/2005	Gary M Ducatel	36-1914	5702

23117   7590   10/03/2007

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EXAMINER
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ART UNIT	PAPER NUMBER
2169	

MAIL DATE	DELIVERY MODE
10/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/543,096	DUCATEL ET AL.
	Examiner	Art Unit	
	Dung K. Chau	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 July 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>38-60</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>38-60</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20070927

DETAILED ACTION

Response to Amendment

1.   This Office Action is in response to applicant's communication filed July

09, 2007 in response to PTO Office Action mailed February 7, 2007. The

Applicant's remarks and amendments to the claims and/or the specification were

considered with the results that follow.

2.   In response to the last Office Action, claims 1-37 have been canceled, and

claims 38-60 have been added. As a result, claims 38-60 are pending in this

application.

3.   The rejection of claim 12 under 35 U.S.C. 112 has been withdrawn due to

the amendment filed July 09, 2007.

4.   The objection to the arrangement of the specification has been withdrawn

due to the amendment filed July 09, 2007.

Claim Rejections – 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C.

§ 102 that form the basis for the rejections under this section made in this Office

action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
or

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6.   **Claims 38-43, 45, 48-56, 58, and 60**   are rejected under 35 U.S.C. § 102(a) and 102(e)   as being anticipated by Fables et al.   Pub. No. 2002/0024532.

As to claim 38, Fables et al. teaches the invention as claimed, including a method for improving database searching using a user profile created during a learning phase, said learning phase comprising:

accessing a predetermined set of documents containing a plurality of keywords (page 1, paragraph [0005]);

analyzing said documents and identifying, according to predetermined rules, groups of related keywords therein (page 1, paragraph [0005]; p 2, paragraphs [0023, 0025]);

assigning attributes indicative of relatedness to said groups of related keywords (page 1, paragraph [0011]; page 3, paragraph [0029]); and

storing said relatedness attributes in a user profile means as a user profile (page 1, paragraph [0010]; page 3, paragraph [0030]; page 4, paragraph [0040]);

said method for improving database searching comprising:

receiving a search query comprising one or more search keywords from a user (page 3, paragraph [0027]);

accessing said user profile means and identifying therefrom, for each search keyword, potentially-related keywords to the user (page 4, paragraphs [0043-0044]);

receiving information from the user confirming that any potentially-related keywords are considered to be related keywords (page 4, paragraph [0045]);

in the event that any potentially-related keywords are confirmed by
the user to be related keywords, incorporating such potentially-related
keywords as keywords in an improved search query (page 4, paragraph
[0046]); and

submitting the improved search query to a search engine (page 3,
paragraph [0030]; page 4, paragraphs [0046-0047]).

As to **claim 39**, Fables et al. further teaches a method according to claim
38 further comprising:

updating the set of documents by adding documents to or subtracting
documents form the set (page 3, paragraph [0029-0030]);

analyzing the updated set of documents and identifying existing and
additional groups of related keywords therein, according to predetermined rules
(page 3, paragraph [0030]);

assigning attributes indicative of relatedness to said additional groups of
related keywords (page 3, paragraph [0030]);

updating the relatedness attributes of said existing groups of related
keywords (page 4, paragraph [0045-0046]); and

updating the user profile in accordance with the relatedness attributes of
said existing and additional groups of related keywords (page 4, paragraph
[0045-0046]).

As to **claim 40**, Fables et al. further teaches wherein the step of updating the set of documents comprises updating the set of documents in response to user input (page 1, paragraphs [0008-0010]; page 3, paragraph [0030]).

As to **claim 41**, Fables et al. further teaches wherein the step of updating the set of documents comprises adding new documents to the set of documents in the event of user input confirming that said new documents are of interest to the user (page 1, paragraphs [0008-0010]; page 3, paragraph [0030]).

As to **claim 42**, Fables et al. further teaches wherein the step of updating the set of documents comprises updating the set of documents on the basis of documents viewed by the user following receipt of a response form a search engine to a search to a search query (page 1, paragraphs [0008-0010]; page 3, paragraph [0030]).

As to **claim 43**, Fables et al. further teaches wherein groups containing pairs of related keywords are identified (page 3, paragraph [0027]; page 4, paragraph [0054]).

As to **claim 45**, Fables et al. further teaches wherein the step of assigning attributes comprises assigning importance values indicating the statistical significance of related keywords in the set of documents (page 4, paragraph [0044-0047]).

As to **claim 48**, Fables et al. further teaches wherein said relatedness attributes are stored in the form of fuzzy sets (page 2, paragraph [0019]).

As to **claim 49**, Fables et al. teaches the invention as claimed, including apparatus for improving database searching using a user profile created during a learning phase, said apparatus comprising:

means for accessing a predetermined set of documents containing a plurality of keywords during a learning phase (page 1, paragraph [0005]);

analyzing means arranged to analyze said documents and to identify, according to predetermined rules, groups of related keywords therein (page 1, paragraph [0005]);

attribute assigning means arranged to assign attributes indicative of relatedness to said groups of related keywords (page 3, paragraph [0030]); and

user profile storing means arranged to store said relatedness attributes in a user profile means as a user profile (page 1, paragraph [0010]; page 3, paragraph [0030]; page 4, paragraph [0040]);

means for receiving a search query comprising one or more search keywords from a user (page 3, paragraph [0027]);

means arranged to access said user profile means and to identify therefrom, for each search keyword, potentially-related keywords according to predetermined criteria (page 4, paragraphs [0043-0044]);

means arranged to provide said potentially-related keywords to the user (page 4, paragraph [0043]);

means for receiving information from the user confirming that any potentially- related keywords are considered to be related keywords (page 4, paragraph [0045]);

means arranged to incorporate such potentially-related keywords in an improved search query in the event that they are confirmed by the user to be related keywords (page 4, paragraph [0046]); and

means for submitting the improved search query to a search engine (page 3, paragraph [0030]; page 4, paragraphs [0046-0047]).

As to **claim 50**, Fables et al. further teaches wherein the predetermined set of documents is a set of documents expected to reflect the interests of a specific user (page 1, [0015]).

As to **claim 51**, Fables et al. further teaches 51. (New) Apparatus according to claim 49 wherein the predetermined set of documents is a set of documents derived from a set of documents previously viewed by a specific user (page 4, paragraph [0048]).

As to **claim 52**, Fables et al. further teaches apparatus according to claim 49 further comprising:

document updating means arranged to update the set of documents by

adding documents to or subtracting documents from the set during an updating

phase (page 3, paragraph [0029-0030]);

identifying means arranged to analyze the updated set of documents and

to identify existing and additional groups of related keywords therein, according

to predetermined rules (page 3, paragraph [0030]);

means arranged to assign attributes indicative of relatedness to said

additional groups of related keywords (page 3, paragraph [0030]);

user profile updating means arranged to update the user profile in

accordance with the relatedness attributes of said existing and additional groups

of related keywords (page 4, paragraph [0045-0046]).

As to **claim 53**, Fables et al. further teaches wherein the document updating

means is arranged to update the set of documents in response to user input (page 1,

paragraphs [0008-0010]; page 3, paragraph [0030]).

As to **claim 54**, Fables et al. further teaches wherein the document

updating means is arranged to add new documents to the set of documents in

the event of user input confirming that said new documents are of interest to the

user (page 1, paragraphs [0008-0010]; page 3, paragraph [0030]).

As to **claim 55**, Fables et al. further teaches wherein said document

updating means is arranged to update the set of documents on the basis of

documents viewed by the user following receipt of a response from a search

engine to a search to a search query (page 1, paragraphs [0008-0010]; page 3,

paragraph [0030]).

As to **claim 56**, Fables et al. further teaches wherein the analyzing means

comprises means for identifying groups containing pairs of related keywords

(page 3, paragraph [0028]; page 4, paragraph [0054]).

As to **claim 58**, Fables et al. further teaches wherein the attribute

assigning means comprises importance value assigning means for assigning

importance values indicating the statistical significance of related keywords in the

set of documents (page 4, paragraph [0044-0047]).

As to **claim 60**, Fables et al. further teaches wherein the user profile

storing means is arranged to store said relatedness attributes in the form of fuzzy

sets (page 2, paragraph [0019]).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
>
> or described as set forth in section 102 of this title, if the differences between the
>
> subject matter sought to be patented and the prior art are such that the subject

matter as a whole would have been obvious at the time the invention was made
to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was
made.

8.   Claims **44, and 57** are rejected under 35 U.S.C. § 103 (a) as being unpatentable
over Fables et al. (Fables), Pub. No. 2002/0024562, in view of Choi, Pub. No. US
2002/0042793.

As to **claim 44**, Fables teaches the invention substantially as claimed as
discussed above; however, Fables does not explicitly teach wherein related
keywords are identified from the set of documents by means of a self-organizing
map algorithm.

Choi teaches a method of using Bayesian self-organizing feature maps
(SOM) to identifying related keywords from the set of documents (abstract;
page 3, paragraphs [0051-0052]).

It would have been obvious to one of ordinary skill in the art at the time of
the invention was made to have modified the method for creating and
maintaining a user profile for a user for improving database searching of Fables
by using SOM algorithm, as taught by Choi, as this modification would allow the
related keywords are identified from the set of documents by means of a Self-
organizing map algorithm.

As to **claim 57**, Fables teaches the invention substantially as claimed as discussed above; however, Fables does not explicitly teach wherein the analyzing means comprises means for identifying related keywords from the set of documents by means of a self-organizing map algorithm.

Choi teaches a method of using Bayesian self-organizing feature maps (SOM) to identifying related keywords from the set of documents (abstract; page 3, paragraphs [0051-0052]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified the method for creating and maintaining a user profile for a user for improving database searching of Fables by using SOM algorithm, as taught by Choi, as this modification would allow the related keywords are identified from the set of documents by means of a Self-organizing map algorithm.

9.   Claims **46, 47, and 59** are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Fables et al. (Fables), patent no. US 6895406, in view of Kawasaki, Patent No. US 6539375.

As to **claim 46** Fables teaches the invention substantially as claimed as discussed above; however, Fables does not explicitly teach the step of assigning attributes comprises assigning life-span values indicating the expected remaining period of time of relatedness between keywords in the set of documents.

Kawasaki teaches the use of an aging algorithm to generate a level of recent

interest (Fig 3; column 4, lines 42-48; column 5, lines 9-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified the method for creating and maintaining a user profile for a user for improving database searching of Fables by using aging algorithm, as taught by Kawasaki, as this modification would allow to obtain the life-span values indicating the expected remaining period of time of relatedness between keywords in the set of documents.

As to **claim 47**, Fables teaches the invention substantially as claimed as discussed above; however, Fables does not explicitly teach the step of updating the relatedness attributes comprises a step of systematically decreasing the life-span values over time.

Kawasaki teaches the use of an aging algorithm to generate a level of recent interest (Fig 3; column 4, lines 42-48; column 5, lines 9-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified the method for creating and maintaining a user profile for a user for improving database searching of Fables by using aging algorithm, as taught by Kawasaki, as this modification would allow to obtain the life-span values indicating the expected remaining period of time of relatedness between keywords in the set of documents.

As to **claim 59** Fables teaches the invention substantially as claimed as discussed above; however, Fables does not explicitly teach the attribute assigning means comprises means for assigning life-span values indicating the

expected remaining period of time of relatedness between keywords in the set of documents.

Kawasaki teaches the use of an aging algorithm to generate a level of recent interest (Fig 3; column 4, lines 42-48; column 5, lines 9-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified the method for creating and maintaining a user profile for a user for improving database searching of Fables by using aging algorithm, as taught by Kawasaki, as this modification would allow to obtain the life-span values indicating the expected remaining period of time of relatedness between keywords in the set of documents.

Response to Arguments

10.   In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "**discovery of those keywords automatically**"; "**capable of creating, and optionally updating, a user profile without requiring human intervention**"; "**refinement of the search query itself without requiring users to provide individually-entered preferences or personal data**";) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11.   Applicant's arguments filed July 09, 2007 have been fully considered but they are not persuasive.

Conclusion

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung K. Chau whose telephone number is 571-270-1754. The examiner can normally be reached on Mon - Friday 7:30am - 5:00pm Est, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chace can be reached on 571-272-4190. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dung Chau
Examiner
Art Unit 2169

August 27, 2007

CHRISTIAN CHACE
SUPERVISORY PATENT EXAMINER
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